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ENERGY, INSPEC  
NEWS 20 Feb 13 CANCERLIT is no longer being updated  
NEWS 21 Feb 24 METADEX enhancements  
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NEWS 23 Feb 24 TEMA now available on STN  
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation  
NEWS 25 Feb 26 PCTFULL now contains images  
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NEWS 27 Mar 19 APOLLIT offering free connect time in April 2003  
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NEWS 29 Mar 24 PATDPAFULL now available on STN  
NEWS 30 Mar 24 Additional information for trade-named substances without  
structures available in REGISTRY  
NEWS 31 Apr 11 Display formats in DGENE enhanced  
NEWS 32 Apr 14 MEDLINE Reload  
NEWS 33 Apr 17 Polymer searching in REGISTRY enhanced  
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NEWS 35 Apr 21 New current-awareness alert (SDI) frequency in  
WPIDS/WPINDEX/WPIX  
NEWS 36 Apr 28 RDISCLOSURE now available on STN  
NEWS 37 May 05 Pharmacokinetic information and systematic chemical names  
added to PHAR  
  
NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0jb(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information

NEWS LOGIN      Welcome Banner and News Items  
NEWS PHONE      Direct Dial and Telecommunication Network Access to STN  
NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 18:20:06 ON 13 MAY 2003

FILE 'BIOSIS' ENTERED AT 18:20:12 ON 13 MAY 2003  
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FILE COVERS 1969 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 7 May 2003 (20030507/ED)

=> s ?deoxyglucose  
L1 11451 ?DEOXYGLUCOS

=> s (tba or (thiobarbituric (w) acid))  
2355 TBA  
50 TBAS  
2388 TBA  
(TBA OR TBAS)  
6884 THIOBARBITURIC  
1116833 ACID  
293540 ACIDS  
1247164 ACID  
(ACID OR ACIDS)  
6721 THIOBARBITURIC (W) ACID  
L2 7854 (TBA OR (THIOBARBITURIC (W) ACID))

```
=> s edta
      29518 EDTA
      2 EDTAS
L3      29519 EDTA
      (EDTA OR EDTAS)
```

```
=> s ((ferrous(w) sulphate) or iron)
      6909 FERROUS
      18392 SULPHATE
      763 SULPHATES
      18811 SULPHATE
                           (SULPHATE OR SULPHATES)
      336 FERROUS(W) SULPHATE
```

105305 IRON  
170 IRONS  
105372 IRON  
(IRON OR IRONS)

L4 105525 ((FERROUS(W) SULPHATE) OR IRON)

=> s 11 and 12 and 13 and 14  
L5 1 L1 AND L2 AND L3 AND L4

=> d 15 kwic

L5 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
TI REACTIVITY OF HYDROXYL AND HYDROXYL-LIKE RADICALS DISCRIMINATED BY RELEASE  
OF THIOBARBITURIC-ACID-REACTIVE MATERIAL FROM DEOXY  
SUGARS NUCLEOSIDES AND BENZOATE.

AB. . . reaction independent of O<sub>2</sub> - by the direct addition of a ferrous salt. OH. damage was detected by the release of **thiobarbituric** acid-reactive material from deoxy sugars, nucleotides and benzoate. The carbohydrates deoxyribose, deoxygalactose and **deoxyglucose** were substantially degraded by the Fe<sup>2+</sup> salt and the Fe<sup>3+</sup> salt in the presence of an O<sub>2</sub> --generating system; deoxyinosine, deoxyadenosine and benzoate were not. Addition of **EDTA** to the reaction systems producing radicals greatly enhanced damage to deoxyribose, deoxyinosine, deoxyadenosine and benzoate, but decreased damage to deoxygalactose and **deoxyglucose**. OH. scavengers were effective inhibitors only when **EDTA** was present. Inhibition by catalase and desferrioxamine confirmed that H<sub>2</sub>O<sub>2</sub> and Fe salts were essential for these reactions. Apparently in the absence of **EDTA**, Fe ions bind to the carbohydrate detector molecules and bring about a site-specific reaction on the molecule. This reaction is. . . by scavengers such as mannitol, glucose and thiourea, which can themselves bind Fe ions, albeit weakly. In the presence of **EDTA**, however, Fe is removed from these binding sites to produce OH. in free solution. These can be readily intercepted by. . .

IT Miscellaneous Descriptors  
DEOXYRIBOSE DEOXYGALACTOSE DEOXYGLUCOSE DEOXYINOSINE  
DEOXYADENOSINE OXYGEN TOXICITY **EDTA** THIOUREA MANNITOL GLUCOSE  
IRON SALTS HYDROGEN PEROXIDE

RN 50-99-7 (GLUCOSE)  
60-00-4 (**EDTA**)  
62-56-6 (THIOUREA)  
154-17-6 (**DEOXYGLUCOSE**)  
504-17-6 (**THIOBARBITURIC-ACID**)  
533-67-5 (DEOXYRIBOSE)  
766-76-7 (BENZOATE)  
890-38-0 (DEOXYINOSINE)  
958-09-8 (DEOXYADENOSINE)  
7439-89-6D (IRON)  
7722-84-1 (HYDROGEN PEROXIDE)  
7782-44-7 (OXYGEN)  
69-65-8Q, 87-78-5Q (MANNITOL)

=> d 15 ibib, iabs

L5 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
ACCESSION NUMBER: 1985:292997 BIOSIS  
DOCUMENT NUMBER: BA79:72993  
TITLE: REACTIVITY OF HYDROXYL AND HYDROXYL-LIKE RADICALS  
DISCRIMINATED BY RELEASE OF **THIOBARBITURIC**-  
ACID-REACTIVE MATERIAL FROM DEOXY SUGARS  
NUCLEOSIDES AND BENZOATE.  
AUTHOR(S): GUTTERIDGE J M C  
CORPORATE SOURCE: DIVISION ANTIBIOTICS AND CHEMISTRY, NATIONAL INSTITUTE

BIOLOGICAL STANDARDS AND CONTROL, HOLLY HILL, LONDON NW3  
6RB, U.K.

SOURCE: BIOCHEM J, (1984 (RECD 1985)) 224 (3), 761-768.  
CODEN: BIJOAK. ISSN: 0306-3275.

FILE SEGMENT: BA; OLD  
LANGUAGE: English

ABSTRACT:

Hydroxyl radicals (OH.) can be formed in aqueous solution by a superoxide ( $O_2^-$ )-generating system in the presence of a ferric salt or in a reaction independent of  $O_2^-$  by the direct addition of a ferrous salt. OH. damage was detected by the release of thiobarbituric acid-reactive material from deoxy sugars, nucleotides and benzoate. The carbohydrates deoxyribose, deoxygalactose and deoxyglucose were substantially degraded by the  $Fe^{2+}$  salt and the  $Fe^{3+}$  salt in the presence of an  $O_2^-$ -generating system; deoxyinosine, deoxyadenosine and benzoate were not. Addition of EDTA to the reaction systems producing radicals greatly enhanced damage to deoxyribose, deoxyinosine, deoxyadenosine and benzoate, but decreased damage to deoxygalactose and deoxyglucose. OH. scavengers were effective inhibitors only when EDTA was present. Inhibition by catalase and desferrioxamine confirmed that  $H_2O_2$  and Fe salts were essential for these reactions. Apparently in the absence of EDTA, Fe ions bind to the carbohydrate detector molecules and bring about a site-specific reaction on the molecule. This reaction is poorly inhibited by most OH. scavengers, but is strongly inhibited by scavengers such as mannitol, glucose and thiourea, which can themselves bind Fe ions, albeit weakly. In the presence of \*\*\*EDTA\*\*\*, however, Fe is removed from these binding sites to produce OH. in free solution. These can be readily intercepted by the addition of OH. scavengers.